Title: Hybrid Interaction Mediation in Social Work – A Social Affordances Perspective

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Introduction

The COVID-19 pandemic has led to a fundamental transformation in the way work is conducted, with many professionals rapidly adopting digital technologies to enable hybrid work, which has emerged as the 'new normal' for arranging work in many organizations globally (Waizenegger et al., 2020). Social work, due to its special nature of work and interactions that involve mental vulnerabilities and additional needs of technology users, is among the most impacted professions (Du & Chan, 2021). To build relationships, establish trust, and navigate legal and ethical boundaries when handling sensitive information, fine-tuned communication tailored to the specific vulnerabilities and personal situations of service users is essential. Thus, we are motivated to ask the research questions: What are the consequences of digitally mediated and facilitated interactions in social work? What insights can they offer into technology's broader impact on sensitive workplace interactions? This research is complementary to the current IS literature on virtual work, which has primarily focused on ‘neurotypical’ knowledge workers, by examining the often-overlooked implications of virtualized interactions on inclusivity and accessibility. As most studies have emphasised consequences of pandemic-induced remote work, further investigation is needed into the opportunities presented in post-pandemic hybrid work, where digital, in-person, or hybrid interactions become a point of choice.

Literature Review

Technological Interaction Mediation

Early studies on interaction mediation primarily adopted a technology-centric approach to understanding the selection of communication media. A prominent example of this is the media richness theory (Daft & Lengel, 1986), which aimed to capture how technology users utilise the affordances of different media to reduce ambiguity in communication. MRT posits that the fit between media richness (e.g., the capacity of a medium to convey multiple cues) and task characteristics (e.g., the complexity of information processing requirements) predicts the effectiveness of the media in interactions. However, efforts to validate the MRT have generated conflicting findings, particularly when comparing face-to-face (F2F) communication to digitally mediated conditions, prompting the emergence of alternative frameworks like the theory of Media Synchronicity (Dennis, Fuller, & Valacich, 2008), which attempts to address previous theories’ limited applicability in light of evolving communication technologies.

In response to these limitations, a more recent trend emphasises the social aspects in
theorizing technological mediation of interactions, highlighting the decisive role of users' agency and social context in shaping their perception of communication media and adaptive behaviours in technology use. This has given rise to the investigation of the interplay between media materiality and ongoing social shaping in mediated interactions (e.g., Leonard & Barley, 2008). In this development, new perspectives have emerged to consider factors that involve the relationship between elements such as users' perception, historical contingencies, and contextual dynamics among interacting individuals.

**Social affordances**

Affordances theory, originally introduced by James Gibson (1979) suggests that affordances are intrinsic properties of the environment that offer action possibilities or opportunities for interactions to an organism. In the domain of Information Systems, affordance theory has been applied to various contexts, such as virtual work (e.g., Vidolov, 2022), physical work environments (e.g., Fayard & Weeks, 2007) and online social networks (e.g., Treem & Leonard, 2013). Specifically, the notion of Social Affordances focuses on particular social interactions that are enabled by technological materiality and are influenced by the social designations attributed to them (Gaver, 1996, Fayard & Weeks, 2007). In hybrid social work, the interplay between the physical and digital settings creates a complex socio-materiality, influencing practice and client outcomes with both advantages and disadvantages. The social affordances lens helps us understand how the social and material context of interactions shape communication and impact relationship building.

**Interactions in physical and virtual settings**

Physical and digital environments differ in their social affordances, with physical technologies offering more embodied and tactile experiences, while digital technologies provide greater flexibility and scalability (Gaver, 1996). Technology-mediated interactions were initially seen as deficient compared to F2F interactions for relationship building, due to reduced social presence and social cues (Kiesler, Siegel and McGuire, 1984). However, the rise of online communities has shown that strong relationships can develop virtually (Peris et al., 2002). People can adapt the style and timing of their interactions to the medium, and lack of F2F cues does not preclude the forming of deep, intimate social bonds (Walther, 1996). In fact, contextual factors can combine to make online communication more sociable and friendly due to factors like identity control and freedom from appearance concerns (Walther and Parks, 2002). Digital technologies may also offer communication affordances surpassing F2F interactions in ways maintaining ongoing background awareness (Ito and Okabe, 2005) or enabling a hybrid mode between oral (informal) and written (formal) communication traditions (Thurlow 2003). These affordances can make virtual communication appealing to users with specific vulnerabilities or sensitivities.

**Methods**

We conducted semi-structured interviews with social workers in the UK and Hong Kong to acquire an in-depth understanding of their ongoing experience in virtual and hybrid work after their adaptation during COVID-19 with a specific focus on the use of digital
technologies. In Hong Kong, 23 social workers were recruited from a diverse range of organizations, while in the UK, 14 social workers from a local government organization participated. The dataset consists of both frontline practitioners and supervisors from a variety of social work areas (e.g., family service, school social work, youth/elderly service, adult social care), who deliver service to clients with differing vulnerabilities (e.g., physical and mental health conditions, disability, neurodiversity) and circumstances in different areas of their life (e.g., employment, housing, finance, family relationship). The specific professional context and responsibilities of social workers varied slightly between the UK and Hong Kong. However, in both contexts, social workers play a critical role in supporting vulnerable individuals and communities, where social interaction and relationship building are central aspects.

According to Braun & Clarke (2013), codes can be “data-derived” or “semantic” to reflect the explicit semantic meaning in the data, or can be “researcher-derived” or “latent” that involve the researcher’s conceptual and theoretical frameworks to identify implicit meaning underlying the data (p. 207). In our data analysis, we first went through a first-round complete coding that identify all semantic codes (also called “descriptive code) in the dataset. As the codes reflect the explicit surface meaning directed by the participants, inter-coder reliability is controlled to reduce subjective interpretations. As latent themes become salient after familiarizing with the data and semantic codes, we refined emergent themes and categories through multiple rounds of latent coding. Affordances Theory is consulted to inform our analysis in this phrase, with a particular focus on social affordances as a theoretical lens to unpack the material enactment of different social interactions in collocation or mediated by digital technologies. Integrating inductive and deductive reasoning uncovers patterns and authentic meanings in contextual data. It situates findings within broader theoretical conversations, demonstrating relevance and yielding transferable insights beyond social work, contributing to wider organizational and IS scholarship.

Findings

We identified social affordances in 3 modes of interactions: (1) digitally mediated interactions (e.g., videocalls, telephone, emails/text message, social media), (2) in-person interactions supported by analogue technology (non-digital), and (3) in-person interactions facilitated by digital technology (e.g., mobile device use during in-person visits). Some highlights of initial findings are presented as follows:

Digitally mediated interactions
The location-independent accessibility afforded by video calling is underscored by many clients and social workers, which enables essential communication in constrained scenarios (e.g., COVID). Different vulnerabilities require varied preferences over communication channels – e.g., individuals with hearing barriers prefer text-based interactions, while those with dyslexia may find text-based communication challenging. Asynchronous interaction (e.g., text, email) reduces negative psychological influences for clients with specific vulnerabilities such as autism. Absence or reduction of non-verbal cues in digitally mediated interactions can reduce interaction’s intensity and intrusiveness to ease tension
for sensitive participants. Digitally mediated communication affords information recording for future auditing and facilitate recalling for memory barriered clients. Engaging with clients on social media can provide social workers with insights into clients' digital lives.

**In-person interaction supported by analogue technology**

Physically collocated interaction (e.g., home visit), is preferred by certain groups (e.g., people with low digital skills or those in digital poverty) but resisted by others (e.g., socially anxious or neurodivergent clients) due to the intensity of the interaction. In-person interaction provides a sense of gravity and clarity that can facilitate transactional and formal communication. However, for clients who harbour mistrust towards authorities, this can feel intrusive and may be detrimental to relationship building. Enacting interactions with analogue tools (e.g., pen and paper) affords emotional connection that aids in navigating difficult situations, such as bereavement. Interactions in collocated physical settings offer social workers holistic environmental information that shed light into the client’s personal life, providing tacit understanding of their daily experiences and live situations.

**In-person interaction facilitated by digital technology**

Supporting an in-person visit with digital tool (e.g., mobile devices) can help reduce administrative time and enhance data quality, which is dependent on the social worker’s digital skills. However, typing information up on a mobile device could reduce communication naturalness and divert attention away from the client and. Digital technology can contribute to a perceived sense of unfriendliness during interactions. Technological disruptions (e.g., glitches, internet disconnections) can lead to interruptions in interaction, which may barrier relationship building and reduce trust. In extreme cases, the mere presence of digital technology can induce anxiety in certain clients.

To exemplify our data analysis approach, an example coding table is attached in the appendix.

As demonstrated, our findings suggest nuanced consequences of the materiality of social interactions leading to both positive and negative effects on social worker-client relationships, contingent upon individual clients' vulnerabilities and their ongoing life circumstances. Based on the findings from social work context, we propose a transferable framework of consequences of technology-mediated interactions for sensitive workplace.

**Conclusion**

Our research underscores the importance of recognizing the changing nature of social work practice and the need to adapt to emerging trends of hybrid arrangements, contributes to both the IS and organizational literature and provides practical insights for knowledge workers and organizational policymakers that goes beyond the context of social work. First, practitioners in hybrid working arrangements should be aware of the impact of virtualised or digitally facilitated interactions, considering the unique needs of participants with diverse vulnerabilities. Secondly, hybrid interactions require a skill to tailor communication strategies, both in the selection and use of digital technology, and in adapting their manners of interaction to meet the situational needs. Finally, a greater support for organizations to
provide training around inclusive technology use in a remote or hybrid working arrangement is advisable. This includes investing in appropriate digital infrastructure, providing training for hybrid-specific skills, and establishing inclusivity protocols.

References (a selection of main influences are included)

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## Appendix – table of example coding

<table>
<thead>
<tr>
<th>Mode of interaction and technology used</th>
<th>Vulnerability and special situation</th>
<th>Material element of interaction (features)</th>
<th>Social element of interaction</th>
<th>Social affordances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digitally mediated interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video conferencing (WhatsApp)</td>
<td>Cognitive impairment</td>
<td>Synchronous, unnatural, digitally altered representation (unnatural)</td>
<td>Limited comprehension of real-time video communication</td>
<td>Perceptual disconnect</td>
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<tr>
<td></td>
<td>Technology unfamiliarity</td>
<td></td>
<td></td>
<td>False Affordance: Non-interactive media</td>
</tr>
<tr>
<td>Example quotations:</td>
<td>“…because the elderly does not understand the functionality of video communication […] elderly individuals with mild cognitive impairments may recognize their family members and be aware of their presence. However, they may not actually understand what is happening [during videoconferencing]. They might think they are simply looking at photos or watching past video clips without realizing that it is a real-time face-to-face communication.”</td>
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<tr>
<td>Digitally mediated interaction</td>
<td></td>
<td></td>
<td></td>
<td>Anxiety reduction</td>
</tr>
<tr>
<td>Text-based ICT</td>
<td>Autism, social anxiety</td>
<td>Asynchronous communication, text-based</td>
<td>Anxiety reduction, comfort, social avoidance</td>
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<td></td>
<td>Elderly with reduced responsiveness</td>
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<td></td>
<td></td>
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<tr>
<td>Example quotations:</td>
<td>“Especially for some people that are autistic. … E-mail is their preferred level. They can take time to think about their responses. The phone panics that they don't like that.” “Text, text is good because some service users don't like to be called. Don't like, don't answer the phones and they just tell me a text, especially if they're 50, 60. Just send me a text so that that takes advantage.”</td>
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<tr>
<td>Digitally mediated interaction</td>
<td></td>
<td></td>
<td></td>
<td>Sense of control</td>
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<tr>
<td>Voice-only ICT, Phone</td>
<td>Depressive disorder</td>
<td>Synchronous communication, voice-only</td>
<td>Reduced non-verbal cues and naturalness</td>
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<tr>
<td></td>
<td>Social anxiety</td>
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<tr>
<td>Example quotations:</td>
<td>“The impersonal nature of speaking to someone over the phone might, for some people, be less of an investment in terms of anxiety or worry, because we do have quite a high proportion of people with sort of depressive disorders, social anxieties and alongside people on the autistic spectrum, that may find digital technologies more… in terms of that…that sphere of control and therefore might feel more comfortable communicating digitally than face to face”</td>
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<tr>
<td>in-person interaction</td>
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<tr>
<td>Physical collocation</td>
<td>Sensitive of privacy</td>
<td>Collocated physical environment</td>
<td>Personal boundary and territoriality Privacy</td>
<td>Personal space intrusion</td>
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<tr>
<td></td>
<td>Protective of personal space</td>
<td></td>
<td></td>
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<tr>
<td>Example quotations:</td>
<td>“… actually meeting face to face is excruciating. So I'm kind of thinking for some individuals with a particular need actually to be able to, to undertake things remotely, to not actually have to meet with someone, to have eye contact and not have to let somebody into your personal space, which is really intrusive. So I think I think it's that balance around not making the assumption.”</td>
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<tr>
<td>in-person interaction</td>
<td>Need for assessing personal situation</td>
<td>Collocated physical environment with no digital technology</td>
<td>Need for holistic information</td>
<td>Holistic personal information acquisition</td>
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<tr>
<td>Physical collocation</td>
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<tr>
<td>Example quotations:</td>
<td>“…seeing people physically… what you end up with is a process where there's a whole load of information about a person. […] there's that whole kind of ‘visceral’ information about seeing someone being with someone, knowing what it feels like to be with them, and to be in their space with them all of that”</td>
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